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ABSTRACT

Early identification of children at risk for various forms of school maladaptation is critical in rural schools, where services and resources are typically limited. The present study assesses the psychometric characteristics and utility of the AML, a teacher rating scale employed in a rural region. The 11-item teacher scale yields 4 scores: acting-out/aggressive, moody, learning, and total. A sample of 575 school children in 21 first- through third-grade classrooms across 3 southern Appalachian counties were rated by their teachers. Results indicate that, for this sample, the scale appears to have substantial reliability and validity features, as well as potential utility as a screening device for early detection of school maladaptation. (Author/RH)

Validation of a screening measure in a rural setting

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Abstract

Early identification of "at risk" children is critical in rural schools where services and resources are typically limited. The present study assesses the psychometric characteristics and utility of a teacher rating scale (the AML) in a rural region. 575 school children in 21 classrooms (Grades 1-3) across three southern Appalachian counties were rated by their teachers. For this sample, the scale appears to have substantial reliability and validity features, as well as potential utility as an efficient screening device for early detection of school maladaptation.

Validation of a screening measure in a rural setting.

Substantial evidence exists suggesting that early identification and intervention with children at risk for various forms of school maladaptation can minimize dysfunction (Brownbridge & Van Vleet, 1969; Cowen, Gesten, & Weissberg, 1979). Systematic early identification/prevention efforts include the Primary Mental Health Project (PMHP) in Rochester, NY (Cowen, 1980), the St. Louis County School Mental Health Program (Glidewell, Gildea, & Kaufman, 1973), the Mt. Sinai (NYC) School Project (Marmorale & Brown, 1974), and the Chicago-Woodlawn Project (Kellam, Branch, Agrawal, & Ensminger, 1975). While varying widely in strategies and procedures, these (and similar) projects all presume that at risk children can be identified in reliable and valid fashion through mass screening procedures. Thus, considerable research in instrumentation for early detection has been reported.

One of the most fully researched early detection devices is the AML, an 11-item teacher rating scale used in the PMHP at the primary level (Grades K-3). It has been shown to have excellent psychometric characteristics (Cowen, Dorr, Clarfield, Kreling, McWilliams, Pokracki, Pratt, Terrell, & Wilson, 1973), screening efficiency (Lorion & Cowan), behavioral validity (Durlak, Stein,& Mannarino, 1980), and utility with Headstart (Carberry & Handel, 1980) and upper elementary (Dorr, Stephens, Pozner, & Klodt, 1980) populations. However, no information is available regarding its

usefulness in rural areas, where population and ecological characteristics may differ significantly (e.g., cultural values, service delivery systems).

Efficient and effective early identification of maladapting children is of paramount importance in rural areas. Rural schools are plagued by a variety of problems in delivering services. Low funding bases and underdeveloped community resources, for example, place limits on special educational programs and services. Rural schools also are unable to attract and retain well-trained teachers and specialists, and lack support for educational goals and activities which involve change (Helge, 1981). Under these circumstances, many children with learning and behavioral problems are either not identified or are referred after their difficulties have become intractable.

The present study seeks to address the need for data on the ecological validity of screening instrumentation in rural settings. The psychometric characteristics of the AML with a rural sample are assessed to provide a basis for conducting early detection and intervention programs in similar settings. Rural school psychologists, who typically experience frustration in organizing and delivering services (Trenary, 1980), can utilize these data in planning early identification efforts.

Method

Subjects and setting

575 school children in 21 classrooms (Grades 1-3) were included in the sample. Teacher volunteers were solicitied from

three rural county school districts in southeastern Kentucky. The schools are located in a highly rural, mountainous region of Southern Appalachia, where coal-mining and farming are the primary occupations, unemployment and poverty rates are high, and educational and community resources are limited.

As often occurs in elementary schools, all 21 teachers in the study were female. Regarding their preparation, 57.6% (n=12) indicated the B.A. as their highest degree, 33.3% (n=7) the masters, and 9.5% (n=2) more advanced training. The mean teaching experience for the sample was 18.0 years, with 13 persons indicating 20 or more years and only 5 less than 10 years. Most (n=16) had been teaching at the same grade level for at least three years, and the mean for years taught in the same district was 16.88. 20 of the 21 teachers stated that they were originally from the eastern Kentucky region. Thus, participating teachers were experienced and long-term residents of the area.

Procedure

During the spring of 1981 (April-May), teacher volunteers were asked to rate all the children in their classrooms on the AML. At the same time, they were asked to provide data for each pupil regarding prior retention, absenteeism, disciplinary action, and/or referral for special services. Fourteen days after obtaining this data, the AML was readministered with the same sample. One set of data (for one classroom) was incorrectly filled out in the original sample, and had to be eliminated from the analysis.

Instrument

The AML is an 11-item teacher rating scale (see Table 1) It

yields 4 scores: an A (acting-out/aggressive) score based on 5 items, a M (moody) score for 5 items, an L (learning) score for the remaining item, and a total (T) score. The teacher is asked to rate the frequency of a child's behavior along 5-point behavior frequency scales (1=never, 5=most or all the time). Generally, it takes teachers approximately 20 minutes to rate an entire class.

Results and Discussion

In general, the AML appears to have substantial reliability and validity with the current sample. A variety of analyses are seen below.

Table 2 presents test-retest reliability coefficients for the scale with the total sample. For individual items, reliability coefficients range from .69 to .89, with the latter on item 11, which also is the L scale. For aggregated scale scores, reliability coefficients range from .86 to .91, which are well within acceptable limits, especially for a screening instrument. Confidence in the scale's reliability is further strengthened by its coefficient alpha reliability estimate, which is .91.

Insert Table 2 about here

Table 3 provides grade level means for the sample for all the items and subscales. Also, results of an ANOVA and post hoc analysis (Duncan's new multiple range test) are shown. As can be seen, clear differences in mean scores emerge at both the item and subscale levels, with the directionality of maladjustment tending toward the older children. Probably, this reflects the expected finding of children's problems emerging and worsening as

their school careers unfold. This may also reflect the lack of services in rural areas for children with learning and adjustment problems. In this context, early identification must be linked with meaningful preventive interventions.

Insert Table 3 about here

In Table 4, sex by grade comparisons are shown, with significant t-test differences labeled. Generally, it appears that boys are far more likely to be identified than girls, consistent with the literature. At the subscale level, the A and L scales, as well as the total AML score, seem to discriminate in similar fashion. At the item level, descriptors such as fighting, restlessness, poor play behavior, disruptiveness, being hurt when criticized, and learning problems seem to favor boys. Withdrawing types of behaviors, which are more subtle, do not discriminate between the sexes.

Insert Table 4 about here

Tables 5 through 7 present item-item and item-scale intercorrelations across Grades 1-3. Particularly at Grades 1 and 3, a pattern emerges in which individual items correlate highly with their respective subscales, and to a significantly lesser degree with other subscales.

Insert Tables 5,6, and 7 about here

When subjected to factor analysis (principal components with varimax rotation), a clear underlying factor structure for the instrument emerges, again principally in Grades 1 and 3. Tables 8, 9, and 10 present these data for the three grade levels. As can be seen, for Grades 1 and 3, Factors 1,2, and 3 correspond quite closely to the A,M, and L subscales for the instrument. In Grade 2, it appears that the M scale items do not clearly emerge, but combine with the A scale items to form one underlying factor. This is consistent with prior research, which indicates that this scale is less stable and more vulnerable. Nevertheless, it remains unclear why this occurred only with the 2nd Grade population in the present sample.

Insert Tables 8,9, and 10 about here

In Table 11, data relating AML scores to referral status are shown. Significant differences across referred versus nonreferred populations at each grade level in terms of AML scores are indicated by asterisk. In general, it appears that the instrument discriminates best for this criterion at the earliest grade levels. This is fortunate in that the purpose of the procedure is early detection and intervention. Perhaps partly because of the selection and sorting process which begins upon school entrance, the scale appears to gradually become sensitive to more discrete categories of behavior. At Grades 2 and 3, learning dysfunction (L) appears to become discriminated.

Insert Table 11 about here

Further tangential evidence of the scale's discriminability is seen in Table 12. Here the relationship between AML scores and whether or not the child had been retained is explored. Generally, it appears that the L subscale is most sensitive, although significance is also reached for the total AML score at Grade 3. At this stage, of course, children will have had more opportunities to be retained, providing a fairer estimate of this kind of criterion related validity.

Insert Table 12 about here

Tables 13 through 16 contain normative data across the three grade levels for each subscale, and for the total AML score, in the form of cumulative percentages. Lower scores indicate less maladjustment. As can be seen, scores tend to cluster at the lower end. Cut-offs for screening can be set at whatever level seems appropriate given local needs and available resources for further evaluation and intervention.

Insert Tables 13-16 about here

To summarize, the AML appears to retain most of the psychometric characteristics found in prior studies (Cowen, et.al, 1973) when used with a rural population. It clearly is reliable and appears to have substantial criterion-related and factorial validity. Thus, it can serve a useful purpose as an integral part of a broad-based program of school psychological services in a rural setting, where efficient and early identification of

"at risk" children are especially critical program components.

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AML Behavior Rating Scale

A		
M		
L		
T		

upil _____ Sex: M F (Circle one)

upil's 1st 2nd time in grade (Circle one)

eacher _____ School _____

lease rate the pupil's behavior as you have observed and experienced it since the beginning f school according to the following scale:

(1) Never - You have literally never observed this behavior in this child.

(2) Seldom - You have observed this behavior once or twice.

(3) Moderate frequency - You have seen this behavior more often than once a month but less often than once a week.

(4) Often - You have seen the behavior more often than once a week but less often than daily.

(5) Most or all of the time - You have seen the behavior with great frequency, averaging once a day or more often.

This pupil:	Never (1)	Seldom (2)	Moderately Often (3)	Often (4)	Most or a of the ti (5)
1. gets into fights or quarrels with other students.	( )	( )	( )	( )	( )
2. has to be coaxed or forced to work or play with other pupils.	( )	( )	( )	( )	( )
3. is restless.	( )	( )	( )	( )	( )
4. is unhappy or depressed.	( )	( )	( )	( )	( )
5. disrupts class discipline.	( )	( )	( )	( )	( )
6. becomes sick when faced with a difficult school problem or situation.	( )	( )	( )	( )	( )
7. is obstinate.	( )	( )	( )	( )	( )
8. feels hurt when criticized.	( )	( )	( )	( )	( )
9. is impulsive.	( )	( )	( )	( )	( )
10. is moody.	( )	( )	( )	( )	( )
11. has difficulty learning.					

Table 2

Test-retest reliability coefficients

1	.83
2	.77
3	.77
4	.81
5	.84
6	.74
7	.75
8	.69
9	.73
10	.79
11 (L)	.89
A	.89
M	.86
AML	.91

Table 3

Grade level means and ANOVAs

	1 (n=191)	2 (n=191)	3 (n=193)	F	Significant Duncans
1.	1.90	1.88	2.35	10.95	1-3, 2-3
2	1.97	1.71	2.26	7.89	All
3	2.02	1.76	2.66	19.34	All
4	1.69	1.51	2.39	21.53	1-3, 2-3
5	1.83	1.70	2.09	7.65	1-3. 2-3
6	1.48	1.41	1.98	10.47	1-3, 2-3
7	1.63	1.74	2.04	4.57	1-3, 2-3
8	1.86	1.61	2.36	20.49	All
9	1.84	1.77	2.44	9.03	1-3, 2-3
10	1.76	1.70	2.49	16.86	1-3, 2-3
11 (L)	2.27	1.86	2.83	18.11	All
A	9.23	8.85	11.55	12.69	1-3, 2-3
M	8.77	7.95	11.47	21.93	All
Σ AML	20.26	18.67	25.86	21.28	1-3, 2-3

Table 4

Sex x Grade Comparisons

	1		2		3		Total	
	M	F	M	F	M	F	M	F
1	2.16	1.61*	2.10	1.59*	2.51	2.22	2.24	1.84*
2	2.09	1.84	1.89	1.48*	2.49	2.06*	2.13	1.82*
3	2.15	1.87	2.00	1.46*	2.84	2.50*	2.30	1.99*
4	1.69	1.69	1.60	1.40*	2.59	2.23*	1.93	1.81
5	2.03	1.59*	1.96	1.36*	2.23	1.97	2.07	1.67*
6	1.46	1.51	1.48	1.33	1.93	2.03	1.65	1.61
7	1.75	1.51	1.89	1.54*	2.02	2.06	1.88	1.72
8	1.79	1.93	1.65	1.57	2.17	2.51*	2.04	1.85*
9	1.90	1.77	1.80	1.73	2.45	2.41	2.03	2.00
10	1.78	1.74	1.84	1.52*	2.65	2.36	2.06	1.91
11 (L)	2.41	2.11	2.16	1.48	3.27	2.47*	2.57	2.06*
A	10.00	8.36*	9.75	7.67*	12.02	11.16	10.51	9.22*
M	8.81	8.72	8.46	7.29*	11.82	11.17	9.58	9.22
EAML	21.22	19.19	20.37	16.46*	27.13	24.80	22.66	20.49*

*Significant t-test at $p \leq .05$

Table 5

Item-item and item-scale correltation matrix: Grade 1

(n - 191)

	1	2	3	4	5	6	7	8	9	10	11	A	M	ΣAML
1	1.00	0.29	0.59	0.30	0.79	0.14	0.58	.17	.68	.45	.31	.87	.37	.71
2	.29	1.00	.56	.65	.35	.27	.60	.16	.20	.57	.51	.47	.77	.70
3	.59	.56	1.00	.60	.66	.32	.58	.15	.57	.54	.49	.81	.60	.81
4				1.00	.39	.49	.60	.41	.29	.61	.46	.52	.86	.75
5					1.00	.25	.62	.13	.63	.43	.46	.89	.43	.77
6						1.00	.30	.43	.24	.40	.25	.30	.66	.51
7							1.00	.31	.50	.67	.40	.78	.69	.81
8								1.00	.34	.44	.16	.26	.60	.44
9									1.00	.54	.22	.81	.42	.68
10										1.00	.30	.63	.82	.77
11 (L)											1.00	.45	.47	.63
A												1.00	.60	.90
M													1.00	.86
ΣAML														1.00

Table 6

Item-item and item-scale correlation matrix: Grade 2

(n = 191)

	1	2	3	4	5	6	7	8	9	10	11	A	M	ΣAML
	1.00	.57	.51	.49	.64	.41	.48	.43	.32	.60	.47	.80	.65	.76
		1.00	.72	.53	.62	.46	.34	.42	.30	.58	.41	.68	.79	.75
			1.00	.66	.69	.46	.32	.49	.37	.59	.46	.77	.76	.46
				1.00	.60	.48	.32	.54	.40	.56	.43	.66	.80	.75
					1.00	.47	.40	.44	.37	.60	.56	.83	.71	.82
						1.00	.48	.45	.26	.45	.43	.56	.72	.66
							1.00	.35	.34	.45	.49	.69	.49	.64
								1.00	.27	.55	.32	.53	.74	.64
									1.00	.36	.19	.64	.41	.53
										1.00	.51	.70	.82	.79
(L)											1.00	.59	.54	.70
												1.00	.81	.95
													1.00	.93

Table 7

Item-item and item-scale correlation matrix: Grade 3

(n = 190)

1	2	3	4	5	6	7	8	9	10	11	A	M	ΣAML
1.00	.57	.62	.53	.78	.32	.68	.38	.67	.53	.16	.87	.62	.79
	1.00	.56	.58	.51	.32	.47	.29	.47	.52	.38	.60	.73	.72
		1.00	.67	.67	.36	.56	.32	.71	.69	.26	.83	.69	.82
			1.00	.47	.51	.49	.33	.57	.76	.32	.64	.84	.78
				1.00	.29	.70	.37	.69	.51	.21	.90	.56	.79
					1.00	.38	.53	.42	.54	.11	.41	.75	.59
						1.00	.55	.62	.58	.14	.83	.64	.77
							1.00	.46	.42	.04	.49	.64	.57
								1.00	.74	.24	.86	70	.83
									1.00	.30	.71	.86	.83
										1.00	.24	.31	.43
											1.00	.75	.93
												1.00	.92

Table 8

Grade 1 Factor Analysis

	FACTORS		
	1	2	3
1	.90	.07	.12
2	.21	.50	.59
3	.66	.29	.43
4	.22	.72	.44
5	.85	.07	.31
6	.07	.70	.13
7	.61	.47	30
8	.10	.74	-.10
9	.83	.24	-.06
10	.46	.70	.14
11	.20	.11	.92
Variance	4.83	3.84	3.09

Table 9

Grade 2 Factor Analysis

	FACTORS	
	1	2
1	.62	.44
2	.74	.26
3	.78	.28
4	.76	.23
5	.68	.46
6	.55	.38
7	.35	.59
8	.68	.15
9	.58	.04
10	.68	.41
11	20	.94
Variance	6.49	3.78

Table 10

Grade 3 Factor Analysis

	FACTORS		
	1	2	3
1	.87	.19	.05
2	.52	.35	.40
3	.74	.34	.21
4	.45	.62	.32
5	.90	.12	.08
6	.11	.87	.02
7	.76	.35	-.01
8	.29	.68	-.13
9	.74	.39	.13
10	.52	.65	.25
11	.10	.05	.97
Variance	5.80	3.68	2.48

Table 11

Referred vs. nonreferred children

	1			2			3		
	R[1] (n=16)	N (n=175)	F	R (n=20)	N (n=168)	F	R (n=19)	N (n=173)	F
1	3.06	1.79	2.71*	2.00	1.86	.47	2.47	2.34	.52
2	3.38	1.85	3.06*	1.45	1.75	1.49	2.63	2.22	1.55
3	3.16	1.91	2.73*	1.70	1.77	.26	2.79	2.64	.54
4	2.63	1.61	2.76*	1.60	1.51	.30	2.37	2.39	.10
5	2.94	1.72	2.81*	1.70	1.70	.04	2.32	2.06	.87
6	1.94	1.44	1.41	1.40	1.42	.14	2.00	1.97	.14
7	2.88	1.53	3.26*	2.60	1.64	2.85*	2.26	2.00	1.01
8	2.00	1.85	.49	1.50	1.63	.86	2.32	2.35	.15
9	2.88	1.75	2.23*	1.75	1.76	.02	2.42	2.42	.00
10	3.00	1.65	3.18*	1.75	1.69	.24	2.63	2.46	.64
11 (L)	4.06	2.10	5.52*	3.05	1.71	3.88*	4.26	2.68	5.14*
A	14.88	8.71	2.99*	9.75	8.75	1.25	12.26	11.43	.70
M	12.94	8.39	2.87*	7.70	8.00	.44	11.95	11.37	.62
AML	31.88	19.20	3.76*	20.50	18.46	1.29	28.47	25.49	1.44

[1]R = Referred

N = Nonreferred

*Significant at $p \leq .05$

Table 12

Retention status

	1			2			3		
	R[1]	N	+	R	N	+	R	N	+
1	2.04	1.87	-0.65	2.08	1.87	-0.77	2.60	2.34	-0.74
2	2.56	1.89	-2.39*	1.83	1.70	-0.51	2.60	2.23	-1.01
3	2.44	1.85	-2.07*	1.83	1.76	-0.28	3.20	2.63	-1.51
4	2.20	1.61	-2.80*	1.75	1.50	-1.13	3.30	2.34	-2.93*
5	2.00	1.80	-0.76	1.91	1.68	-0.88	2.50	2.06	-1.12
6	1.64	1.45	-0.96	1.33	1.42	.44	3.00	1.92	-2.14
7	1.88	1.60	-1.16	2.00	1.72	-0.98	2.00	2.04	.12
8	1.80	1.86	.37	1.75	1.60	-0.58	2.40	2.35	-0.15
9	1.52	1.89	1.50	2.33	1.73	-2.34*	3.00	2.40	-1.57
10	1.92	1.74	- .78	1.91	1.68	-0.96	3.30	2.45	-2.43*
11 (L)	3.56	2.07	-5.04*	2.25	1.84	-1.25	4.10	2.76	-3.11*
A	9.88	9.13	- .73	10.16	8.77	-1.40	13.30	11.45	-1.16
M	10.12	8.57	-1.89	8.58	7.91	- .79	14.60	11.30	-1.82
AML	23.56	19.77	-2.08*	21.00	18.51	-1.25	32.00	25.52	-2.32*

[1]R = Referred

N = Nonreferred

*Significant at $p \leq .05$

Table 13

AML Normative Table

A Scale

1		2		3	
Score	Cum.%	Score	Cum.%	Score	Cum.%
5	25.7	5	19.9	5	4.1
6	37.7	6	28.8	6	9.3
7	48.2	7	38.2	7	20.2
8	56.5	8	50.8	8	27.9
9	63.4	9	63.9	9	41.5
10	71.7	10	74.9	10	55.4
11	77.0	11	81.7	11	62.7
12	82.2	12	85.3	12	67.4
13	85.9	13	91.6	13	73.1
14	86.9	14	92.1	14	76.7
15	88.5	15	95.8	15	79.3
16	90.6	16	96.9	16	83.9
17	91.6	17	97.4	17	86.5
18	92.7	18	99.5	18	88.6
19	94.2	19	99.5	19	89.6
20	94.8	20	99.5	20	92.2
21	95.8	21	99.5	21	98.8
22	96.9	22	99.5	22	96.4
23	97.9	23	100.0	23	97.9
24	99.5	24	100.0	24	97.9
25	100.0	25	100.0	25	100.0

Table 14

AML Normative Table

M Scale

1		2		3	
Score	Cum. %	Score	Cum. %	Score	Cum. %
5	17.8	5	27.7	5	1.6
6	38.2	6	38.7	6	3.6
7	50.3	7	48.2	7	9.3
8	56.5	8	63.9	8	18.7
9	67.5	9	75.4	9	33.2
10	74.3	10	82.2	10	52.3
11	79.6	11	88.5	11	62.2
12	84.8	12	91.6	12	73,6
13	88.5	13	94.8	13	76.7
14	90.6	14	96.9	14	81.3
15	92.7	15	98.4	15	86.0
16	94.8	16	99.5	16	88.1
17	95.8	17	99.5	17	90.7
18	96.3	18	99.5	18	92.2
19	98.4	19	100.0	19	93.8
20	98.4	20	100.0	20	95.9
21	99.5	21	100.0	21	97.4
22	99.5	22	100.0	22	98.4
23	99.5	23	100.0	23	99.0
24	99.5	24	100.0	24	99.0
25	100.0	25	100.0	25	100.0

Table 15

AML Normative Table

L Scale

1		2		3	
Score	Cum. %	Score	Cum. %	Score	Cum. %
1	45.0	1	49.2	1	15.5
2	64.4	2	78.5	2	50.3
3	79.1	3	90.6	3	69.9
4	84.8	4	95.3	4	80.8
5	100.0	5	100.0	5	100.0

Table 16

Total AML

1		2		3	
Score	Cum. %	Score	Cum. %	Score	Cum. %
11	11.5	11	14.7	11	0.5
12	19.9	12	19.9	12	0.5
13	26.1	13	24.1	13	1.6
14	30.9	14	28.8	14	3.1
15	35.1	15	38.2	15	5.2
16	39.8	16	42.9	16	7.3
17	45.0	17	50.3	17	11.4
18	49.7	18	56.5	18	19.7
19	55.0	19	61.3	19	24.9
20	58.6	20	68.6	20	30.6
21	63.9	21	72.3	21	35.2
22	67.5	22	78.0	22	42.5
23	74.3	23	82.7	23	46.6
24	78.0	24	84.3	24	52.3
25	78.5	25	85.9	25	61.7
26	80.6	26	86.9	26	65.8
27	85.3	27	88.0	27	68.9
28	86.9	28	90.1	28	72.0
29	88.0	29	91.6	29	74.6
30	88.5	30	94.2	30	75.6
31	90.1	31	94.7	31	77.2
32	90.6	32	95.3	32	78.2
33	91.1	33	96.3	33	80.3

Table 16 (con't)

Score	Cum. %
34	91.6
35	92.1
36	93.2
37	95.3
38	95.8
39	95.8
40	86.6
41	86.6
42	86.6
43	86.6
44	97.4
45	97.4
46	98.4
47	99.5
48	99.5
49	99.5
50	99.5
51	99.5
52	99.5
53	99.5
54	99.5
55	100.0

Score	Cum. %
34	97.9
35	98.4
36	98.4
37	98.4
38	98.4
39	99.5
40	99,5
41	99.5
42	99.5
43	99.5
44	99.5
45	99.5
46	99.5
47	100.0
48	100.0
49	100.0
50	100.0
51	100.0
52	100.0
53	100.0
54	100.0
55	100.0

Score	Cum. %
34	84.5
35	85.0
36	89.1
37	89,6
38	90.7
39	90.7
40	91.2
41	93.8
42	94.3
43	94.3
44	94.8
45	95.9
46	96.4
47	96.9
48	97.9
49	97.9
50	97.9
51	99.0
52	99.5
53	99.5
54	99.5
55	100.0